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Notes on *Drypta longicollis* MacLeay and the Status of the Genus-group Name *Desera* Dejean, 1825 (Coleoptera: Carabidae: Dryptini)

Hongbin Liang[1], David H. Kavanaugh[2], and Mingyi Tian[3]

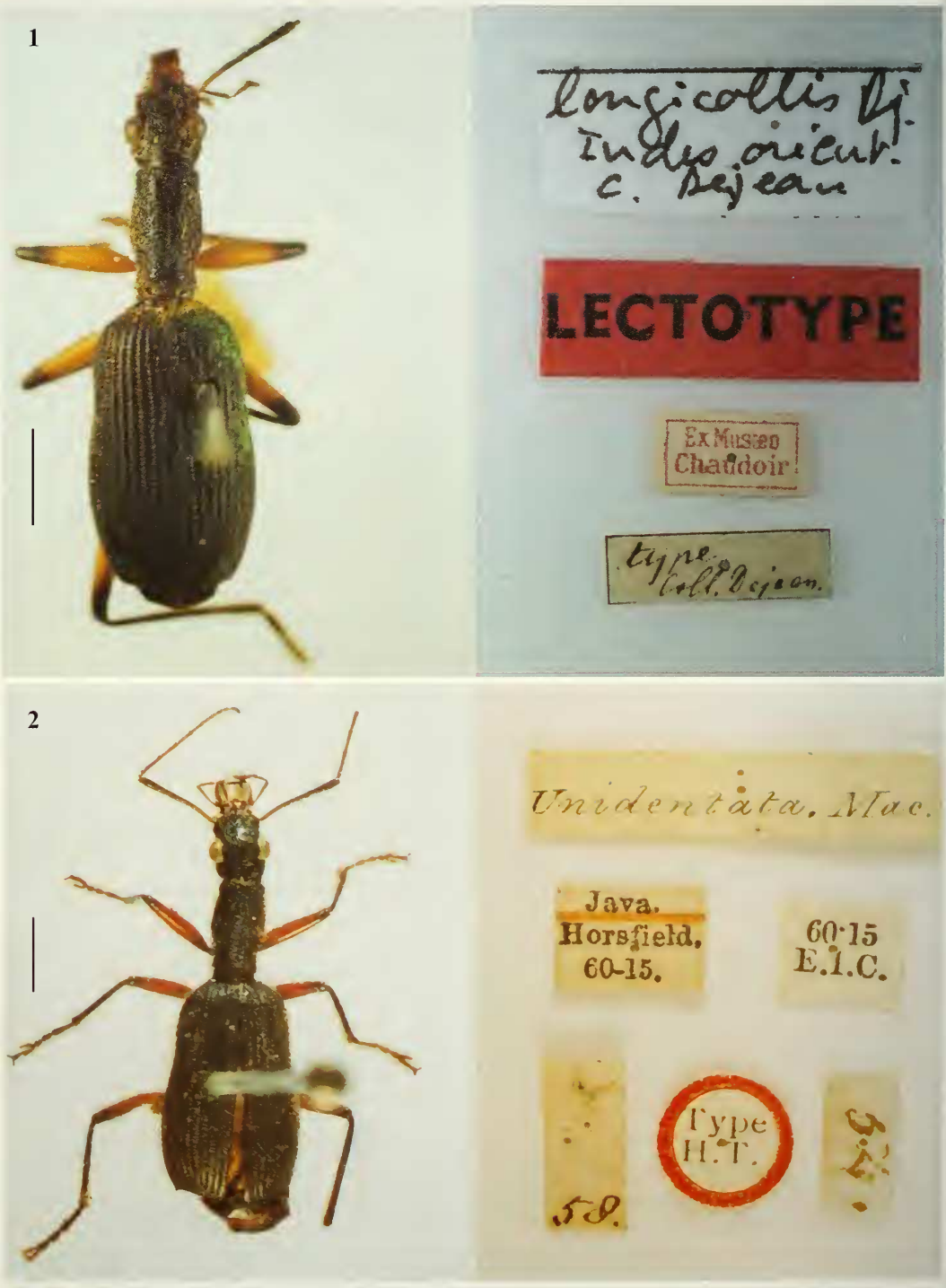
[1] *Institute of Zoology, Beijing 100080, China;* [2] *California Academy of Sciences, 875 Howard Street, San Francisco, California 94103, USA;* [3] *South China Agricultural University, Guangzhou 51064, China*

The taxonomic status of *Drypta longicollis* MacLeay, 1825, mistreated as *Desera longicollis* (MacLeay) for over a century, is clarified as a species of *Drypta* Latreille. With *Drypta longicollis* as type species, genus *Desera* Dejean is a subjective junior synonym of *Drypta*; and *Dendrocellus* Schmidt-Göbel is the valid generic name for species with pectinate tarsal claws previously included in *Desera*. Specimens identified as *Drypta longicollis* MacLeay in Andrewes' collection (The Natural History Museum, London) are found instead to represent *Dendrocellus unidentatus* (MacLeay, 1825). Enhanced descriptions of *Drypta longicollis* and *Dendrocellus unidentatus* and photographs of their type specimens are provided.

Desera Dejean (1825) is one of the two Old World genera currently recognized in tribe Dryptini of family Carabidae. Its members differ from those of the other genus, *Drypta* Latreille (1796), in having pectinate tarsal claw (Andrewes 1936). To date, 18 *Desera* species have been described (Lorenz 1998a), mainly distributed in southeastern Asia.

While sorting specimens of Carabidae in the collection of the Institute of Zoology (IOZ), Beijing, the first author (Liang) discovered several interesting *Desera* specimens collected from Yunnan Province, China. These specimens with brown femora, black tibia, and acute outer angles of their elytra keyed out as *Desera longicollis* (MacLeay 1825), based on the works of Heller (1923:303), Andrewes (1936:136) and Hansen (1976:403). However, Jedlička's monograph (1963:486) indicated that, in *D. longicollis* (MacLeay), the "Aussenwinkel der Flugeldecken stumpf" [outer angles of elytra acute]. In an effort to resolve this contradiction, Liang wrote to Dr. Thierry Deuve at the Muséum National d'Histoire Naturelle (MNHN) in Paris to request information about the type specimens of this species. Deuve kindly examined the types and informed Liang that the outer angle of each elytron in the types of *Drypta longicollis* MacLeay were rounded (Fig. 1), not acute.

Liang then sent his specimens to the third author (Tian) in MNHN for comparison. Subsequent morphological comparison revealed that these specimens were not identical to those of *D. longicollis*. Tian also noticed that the types of *Drypta longicollis*, with simple claws, were actually members of the genus *Drypta*, the genus in which this species was originally described, and not of the genus *Desera* as presently conceived. Subsequently, Liang borrowed specimens of *Desera unidentata* (MacLeay 1825) and *Drypta longicollis* MacLeay from the Natural History Museum (NHM) in London and MNHN and determined that the specimens from Yunnan were identical with *Desera unidentata* (MacLeay) (Fig. 2) specimens.



Habitus and Labels of Type Specimens (scale lines = 2.0 mm)

FIGURE 1 (above). Lectotype of *Drypta longicollis* MacLeay, 1825 (from India).
FIGURE 2 (below). Holotype of *Drypta unidentata* MacLeay, 1825 (from Java).

The fact that *Drypta longicollis* MacLeay is actually a member of genus *Drypta* Latreille, and not of *Desera* Dejean, is also problematic because *D. longicollis* is the type species of *Desera* Dejean. The valid generic name for the species with pectinate tarsal claws, currently included in genus *Desera*, needs to be established.

The purposes of this paper are: (1) to establish the valid generic name for the species currently included in genus *Desera* Dejean; (2) to remove *Drypta longicollis* MacLeay from *Desera* and return it to genus *Drypta* Latreille, and (3) to provide additional descriptive information that will aid in the identification of specimens of both *Drypta longicollis* and "*Desera*" *unidentata*.

The abbreviations used in this paper are as follows: Ant 1 = antennomere 1 (scape); Ant 3 = antennomere 3; PL = length of pronotum measured along median line; PW = Widest width of pronotum; EL = length of elytra; and EW = widest width across both elytra.

Status of the Genus Name *Desera* Dejean

Latreille (1796:75) described genus *Drypta* but did not list any included species with his original description. He later designated *Carabus emarginatus* Gmelin (= *Carabus dentatus* P. Rossi) as type species (Latreille 1802). The status of *Drypta* Latreille as a valid genus is unquestioned.

In his description of *Drypta longicollis*, Dejean (1825:28) listed "*Desera Bonelliana.* Leach" as a synonym of that species, and, at the end of his description, he mentioned that Leach had established a distinct genus, *Desera,* for this species. Our review of Leach's pertinent published works (Leach 1815 and 1817) and of his classification as reported by Samouelle (1819) failed to turn up any mention of a genus *Desera* or of a species, *Desera bonelliana*; so Dejean's assignments must have been based on determinations in Leach's collection and not on a published account. Hope (1831:21) briefly described *Desera nepalensis*, but failed to note the presence of pectinate tarsal claws in this species. Later (Hope, 1838), he cited Leach as the author of *Desera* and designated *Cicindela cylindricollis* Fabricius (= *Carabus distinctus* P. Rossi) as the type species of the genus. In a subsequent brief description of *Desera*, Hope (1838:105) once again omitted any mention of pectinate tarsal claws. His apparent failure to appreciate this distinguishing feature of true "*Desera*" species probably accounts for his selection of a true *Drypta*, *D. distincta* (Rossi), as his type species for *Desera*.

The authorship of genus *Desera* has remained a point of contention; some authors (*e.g.*, Bousquet 2002; Löbl and Smetana 2002) cite Dejean (1825) as the author, others (*e.g.*, Csiki 1932; Andrewes 1939; Lorenz,1998b) credit Hope (1831). If Hope is the author, based on his use of the name in 1831, then *Desera nepalensis* is the type species of *Desera* by monotypy. If his claim of authorship were based on his 1838 paper, with his designation of *Cicindela cylindricollis* Fabricius as type species, then *Desera* would be a subjective junior synonym of *Drypta* Latreille, as was suggested by Andrewes (1939). In fact, Bousquet (2002) has settled the argument to our satisfaction, citing Dejean as author, with Article 11.6 of the 1999 International Code of Zoological Nomenclature as the justification, and with *Drypta longicollis* MacLeay as type species by monotypy. This means that *Desera* Dejean is a junior subjective synonym of *Drypta* Latreille.

In 1846, Schmidt-Göbel described the genus *Dendrocellus*, listed distinguishing features, including the presence of pectinate tarsal claws, and included three species. Two of these were described as new. The first, *Dendrocellus discolor*, is now recognized as a junior synonym of *Desera nepalensis* Hope. The second, *Dendrocellus flavipes*, which Schmidt-Göbel had misidentified as *Drypta flavipes* Wiedemann and transferred to his new genus, is conspecific with and a junior synonym of *Drypta geniculata* Klug. The third species was *D. geniculata* Klug itself. Schmidt-Göbel did not designate one of these as type species.

Chaudoir (1861:545) first included *Drypta longicoillis* MacLeay in *Dendrocellus*, and several other workers followed (Bates 1892; Andrewes 1919 and 1936; Winkler 1924; Jedlička 1963; and Hansen 1967). Dupuis (1912) cited *Dendrocellus* as a subgenus of *Desera* in his description of *Desera gilsoni* from Taiwan. Andrewes (1939:133) synonymized *Desera* with *Drypta*, based on Hope's (1938) type species designation, recognized *Dendrocellus* as a valid genus name, and selected *D. discolor* (= *Desera nepalensis* Hope) as type species. However, *Dendrocellus* has been treated as a junior synonym of *Desera* Dejean (or Hope) by most recent workers (*e.g.*, see Lorenz, 1998b; and Löbl and Smetana, 2003).

Our conclusion that the type species of *Desera* Dejean (*i.e.*, *Drypta longicollis* MacLeay) should be included in *Drypta* leads us to join Andrewes (1939) in treating *Desera* Dejean (not Hope) as a synonym of *Drypta* Latreille and *Dendrocellus* Schmidt-Göbel as the valid name for the species with pectinate tarsal claws formerly included in *Desera* Dejean (or Hope [see above]).

Species Redescriptions

Drypta longicollis MacLeay, 1825

(Figs. 1, 3–4)

Drypta longicollis MacLeay, 1825:28 (India)
Drypta longicollis Dejean, 1825:185 (India).
Dendrocellus longicollis Dejean; Bates, 1892:385 (Burma).
Desera longicollis MacLeay; Jedlicka, 1963:486 (Burma, India).

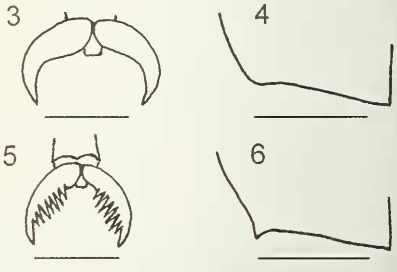
Specimens examined.— Lectotype (Fig. 1), a male (MNHN), "Type, Coll. Dejean", "Ex Museo, Chaudoir";"*longicollis* Dej., Indes Orient."; paralectotype, 1 female (MNHN), "Ex Museo, Chaudoir", "*longicollis* Dej., Indes Orient." Both lectotype and paralectotype are designated here.

Description.— Tarsal claws in type specimens simple (Fig. 3) and outer angle of each elytron round (Fig. 4). Ant 1 with basal third brown, apical two-thirds black. Ratio Ant 1 : Ant 3 = 4.20 (paralectotype); ratio PL : PW = 1.65 (lectotype), 1.64 (paralectotype); ratio EL : EW = 1.74 (lectotype), 1.78 (paralectotype); ratio EW : PW = 2.30 (lectotype), 2.29 (paralectotype). For additional morphological characteristics, refer to Dejean's description (1825: 185–186).

Distribution.— India and Myanmar (= Burma).

Remarks.— *Drypta longicollis* was described by both MacLeay and Dejean in 1825, based on the same specimens (in Dejean's collection) from India (MacLeay 1825:28; Dejean 1825:185). MacLeay's work was several months earlier than Dejean's, and therefore this species name is attributed to MacLeay (Andrewes 1919:134).

Considering his generally excellent work on the carabids of Middle and Southeast Asia, it is strange that Andrewes, after examination of the type of *Drypta longicollis* MacLeay, still mistreated it as representing a *Desera* species. He also misidentified specimens of *Dendrocellus unidentatus* (MacLeay) as *Drypta longicollis* MacLeay (see "Specimens examined" below).



Figures 3–4. *Drypta longicollis* MacLeay, 1825 (lectotype, from India): (3) fore-tarsal claws; (4) outer angle and sutural angle of left elytron.

Figures 5–6. *Drypta unidentata* MacLeay, 1825 (holotype, from Java): (5) fore-tarsal claws; (6) outer angle and sutural angle of left elytron.

Scale bars = 0.24 mm in Figs. 3 and 5 and 1.00 mm in Figs. 4 and 6.

***Dendrocellus unidentatus* (MacLeay), 1825, new combination**
(Figs. 2, 5–6)

Drypta unidentata, MacLeay, 1825:28 (Java).
Desera unidentata (MacLeay), Andrewes, 1919:167 (Java)
Dendrocellus longicollis Dejean; Chaudoir, 1861: 45 (India).
Desera longicollis MacLeay; Andrewes, 1936:136 (India).
Desera longicollis Dejean; Hansen, 1967:403 (Laos).

Specimens examined.— Total 15 specimens. Holotype, 1 female (NHM), "*unidentata* Mac.", "Java, Horsfield, 60-15", "60-15, E.I.C.", "Type, H.T.", "58", "54" ; 1 specimen (NHM, sex status undeterminable), "Bonvouloir collection", "*Desera unidentata* MacLeay, compared with type H.E.A.", "*unidentata* Macleay (*Dendrocellus*) Schmidt-Goebel, Java", "H.E. Andrewes coll., B. M. 1945-97"; 1 female (NHM), "Dammerman, N.W. Seomba, Laora 100M, 104 IV 1925", "Ex Mus., Buitenzurg", "*Desera unidentata* Macl., H.E. Andrewes det."; 1 male (NHM), "Andaman Is., 1915-38", "Ex Coll., Brit. Mus.", "*Desera longicollis* Dej. (See back), compared with type, H.E.A., [on the back of the label] in type the angle of truncture is not dentate"; 1 male (NHM), "Annam, Keng trap, May 1917, R.V. de Salvaza", "*Desera longicollis* Dejean, H.E. Andrewes det.", "H.E. Andrewes Coll., B.M. 1945-97"; 1 female (NHM), "47252", "Captn Wimberley", "Andaman Islands", "Fry Coll., 1905.100, "*Desera longicollis* Dej., H.E. Andrewes det.", "*Dendrocellus longicollis* Dej., Andaman Is."; 1 female (MNHN), "Malacca, H. Deyrolle", "Ex Museo, Chaudoir", "*unidentata*, Java, C. Gary, Reiche"; 1 male (MNHN), "Java", "Ex Museo, Chaudoir", "*unidentata*, Java, C. Gary, Reiche"; 2 females (MNHN), "Ex Museo, Chaudoir", "*unidentata*, Java, C. Gary, Reiche"; 1 male (IOZ), "China, Yunnan Province, Nujiang Prefecture, Lushui County, Liuku Township, Liuku, 800m", N25.86010°, E98.85155°, 25-26 June 2000, Stop #00-7, D.H. Kavanaugh & H.-B. Liang collectors"; 1 male and 2 females (IOZ), "Yunnan, Mengla", "20 April 1982, Peiyu Yu collector, by light trap"; 1 female (IOZ), "Yunnan, Xishuangbanna, Xiaomengyang, 850m", 25 April 1987, Shuyong Wang collector".

Description.— Because Andrewes (1919:167–168) gave a quite detailed redescription, we simply add the following: Ratio Ant 1 : Ant 3 = 3.67 (type), 3.26–3.56 (others); ratio PL : PW = 1.62 (type), 1.50–1.76 (others); ratio EL : EW = 1.67 (type), 1.70–1.82 (others); ratio EW : PW = 2.47 (type), 2.24–2.52 (others).

Distribution.— Indonesia (Java), India (Andaman Is.), Vietnam (central), and China (Yunnan).

Remarks.— Specimens of *Dendrocellus unidentatus* (MacLeay) can be distinguished from those of all other known *Dendrocellus* species by the following combination of character states: femora brown except for apices (black), tibia black, outer angles of elytra strongly dentate (Fig. 6), elytra widened posteriad, elytral intervals densely punctate, tarsal claws markedly pectinate with length of individual pectinations ("teeth") subequal to width of base of tarsal claw (Fig. 5). Andrewes (1919:167) gave a redescription of this species; but there are several errors included, namely: 1) this species was reported as restricted to Java (but present materials indicate that its distribution extends from Java north to India, Laos, Vietnam, and China); 2) antenomere 3 was described as having its base and apex red and separated by a black subapical ring (but in all specimens we examined, the basal half of this antennomere was blackish brown and its apical half brown); 3) the prothorax was described as nearly twice as long as wide (but it is only 1.50–1.75 times as long as wide among specimens we have seen); and 4) the tarsal claws were described as finely pectinate (but they are markedly pectinate in all specimens that we examined).

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